

AMENDMENT TO THE DRAWINGS

Please replace Figure 3 with the attached figure. Figure 3 has been designated by the legend--Conventional Art--.

Attachment: Replacement Sheet (1)

REMARKS

Upon entry of this amendment, which is respectfully requested, Claims 1-4 are pending.

Response to Objection to the Drawings

Applicants have reviewed the Examiner's objection to the drawings. It is respectfully submitted that Figure 3 shows a conventionally known hetero-junction bipolar transistor (HBT) structure. See page 2, lines 8-10 of the specification, which describes Figure 3 as showing the structure of a "conventional" commonly used GaAs HBT. Therefore, Figure 3 has been designated "conventional" art. Accordingly, withdrawal of the objection is respectfully requested.

Response to Rejection Under § 103

Claims 1-4 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Applicant's Admitted Prior Art of Figure 3 in view of U.S. Patent No. 5,332,451 to Hata et al. Applicants respectfully traverse.

Figure 3 represents the conventionally known hetero-junction bipolar transistor (HBT) structure. A HBT structure is an epitaxial substrate having a substrate, a sub-collector layer, a collector layer, a base layer, an emitter layer and a contact layer in this order on the substrate.

In contrast, Hata discloses a semiconductor epitaxial substrate for use in production of field-effect transistors (FET), which has a substrate, a buffer layer on the substrate and an active layer on the buffer layer. The buffer layer has (A) a high-resistance AlGaAs or AlGaInP layer doped with oxygen or a transition metal, and, on the (A) layer, (B) a layer composed of a high-purity GaAs, InGaP or AlGaAs. Hata further discloses in column 6, lines 38-42 and in Claims

11-12 that the total impurity concentration of the (B) layer is $1 \times 10^{16} \text{ cm}^{-3}$ or less, preferably $1 \times 10^{15} \text{ cm}^{-3}$ or less.

Applicants respectfully submit that one skilled in the art would not be motivated to combine the HBT in Figure 3 with the FET disclosed in Hata, since both transistors are different in structure. In this regard, Applicants note that a HBT structure does not have a high purity layer (B) as in a FET structure. Accordingly, withdrawal of the rejection is respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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